- **Consuming alcohol:** Alcohol is a diuretic and thus limits perspiration. It can also impair judgment and result in excessive exposure to the elevated temperatures.
- **Engaging in outdoor activities:** Any activities that increase exposure to the sun or generate additional body heat (e.g., attending outdoor events, exercising, outdoor labor) increase the amount of body heat that must be dissipated.
- **Eating inappropriate meals:** Eating hot and heavy (e.g., high-protein) foods will increase the metabolic rate and increase the amount of body heat that must be dissipated.

2.4.4 Regional factors

Finally, regional characteristics can help determine an individual's health risks during EHEs. These characteristics include:

- **Geographic location:** Climate variability is largely a function of location, and increased variability has been associated with elevated heat-attributable mortality rates *(Chestnut et al., 1998)*.
- **Urbanization and urban design:** As buildings, especially those with dark roofs, and dark paving materials replace vegetation in urban areas, the heat absorbed during the day increases and cooling from shade and evaporation of water from soil and leaves is lost. Urban areas can also have reduced air flow because of tall buildings, and increased amounts of waste heat generated from vehicles, factories, and air conditioners. These factors can contribute to the development of an urban heat island, which has higher daytime maximum temperatures and less nighttime cooling than surrounding rural areas (see *Figure 2.4*). Urban heat islands can increase health risks during EHEs by increasing the potential maximum temperature residents are exposed to and the length of time that they are exposed to elevated temperatures.
- **Residential location:** Residents on the upper floors of buildings will feel the effects of rising heat. This can elevate room temperatures and make it more difficult to maintain a consistent internal temperature if air conditioning is not available or is not used, or if ventilation is restricted.

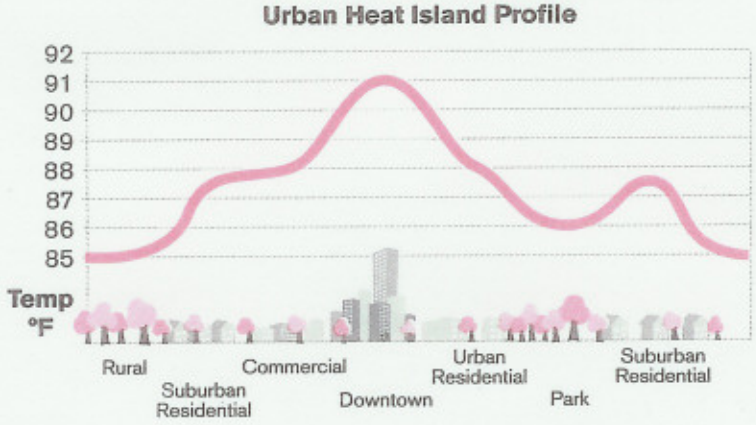

Figure 2.4. Impact of the urban heat island on ambient temperatures.

Source: U.S. EPA, 2006.